Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1 - 7. (Canceled)

8. (Original) A microscopy system for visualizing a fluorescence of a fluorescent substance in an object to be inspected, wherein the microscopy system comprises:

a microscopy optics having

a first beam path for optically imaging an object region onto a light detecting component of a first camera for generating first image data representing images of the object region with light including wavelengths of a first wavelength range comprising a fluorescent emission wavelength of the fluorescent substance, and

a second beam path for providing a magnified first representation of the object region, wherein the first representation represents images of the object regions with light including wavelengths of a second wavelength range comprising at least visible light;

an image memory for storing a set of first image data detected by the first camera during at least a time duration; and

a display system for displaying a sequence of second representations generated from at least a subset of the set of first image data, wherein the sequence of second representations is displayed in superposition with the first representation for observation by the user.

9. (Original) The microscopy system according to claim 8, wherein the display system is configured for repeatedly displaying the series of second representations.

10. (Original) The microscopy system according to claim 8, further comprising a controller configured to select the subset from the set of first image data based on intensities of the images represented by the first image data of the first set.

11. (Original) The microscopy system according to claim 8, further comprising a controller configured for selecting the subset from the set of first image data based on differences of intensities of the images represented by the first image data of the first set.

12 - 29. Canceled

30 (Currently Amended) The microscopy system according to claim [1] 8, wherein the first beam path comprises at least one ocular for representing the images.

31. (Currently Amended) The microscopy system according to claim [29] 30, wherein the display system is configured to superimpose the second representation with the first beam path directed to the ocular.

32. (Currently Amended) The microscopy system according to claim [1] 8, wherein the first beam path comprises at least one light detecting component of a second camera for generating second image data representing images of the object region with visible light, and wherein the second representation is displayed by the display system.

33 - 34. (Canceled)

35. (Original) A microscopy method of visualizing a fluorescence of an object to be inspected, the method comprising:

displaying a magnified first representation of the object for observation by a user, wherein the fluorescence of the object is substantially not visible in the first representation;

recording a series of fluorescent light images of the object during a time duration; and

displaying the recorded series of fluorescent light images of the object after the time period has lapsed such that the series of fluorescent light images is visible for the user and superimposed with the magnified first representation of the object.

36 - 39. (Canceled)

40. (Original) A method of treating an aneurysm of a patient, the method comprising:

clipping the aneurysm;

injecting indocyanine green into the patient;

generating at least one fluorescence image of at least one artery adjacent to the clipped aneurysm; and

assessing vascular blood flow of the at least one artery based on the at least one fluorescence image.

41. (New) The method of claim 35, further comprising:

illuminating the object with light including wavelengths higher than a predetermined wavelength while recording the series of fluorescent light images; and

terminating the illuminating of the object with the light of the wavelengths higher than the predetermined wavelength, based on an analysis of the recorded fluorescent light images, and illuminating the object with light only including wavelengths smaller than the predetermined wavelength.

42. (New) The microscopy method of claim 41, wherein a fluorescent substance is applied to the object when the object is illuminated with the light of the wavelengths higher than the predetermined wavelength.

43. (New) The microscopy system of claim 8, wherein the fluorescent substance comprises indocyanine green.

44. (New) The microscopy system of claim 8, further comprising:

an illumination system for providing at least one illuminating light beam directed onto the object region, wherein the at least one illuminating light beam includes light with wavelengths of the second wavelength range and an excitation wavelength of the fluorescent substance.

45. (New) The microscopy system according to claim 8, wherein the light of the at least one illuminating light beam is emitted from one single light source.

46. (New) The microscopy system according to claim 45, wherein the light source comprises one of a xenon lamp and a halogen lamp.

47. (New) The microscopy system according to claim 8, wherein the illuminating system comprises a first filter disposed in a beam path of the illuminating system, wherein the first filter substantially eliminates light with a fluorescent emission wavelength of indocyanine green from the illuminating light beam.

48. (New) The microscopy system according to claim 8, wherein the illumination system comprises a second filter disposable in a beam path of the illuminating system, wherein the second filter substantially eliminates light from the illuminating light beam having a wavelength higher than 710 nm.

49. (New) The microscopy system according to claim 8, wherein the illumination system comprises a second filter disposable in a beam path of the illuminating system, wherein the second filter substantially eliminates light from the illuminating light beam having a wavelength higher than 690 nm.

50. (New) The microscopy system according to claim 49, wherein at least one of the first and second filters comprises a transmissive filter or a reflective filter.

51. (New) The microscopy system according to claim 8, wherein the illumination system comprises

a first filter which is positionable at a first position in which the first filter is disposed within a beam path of the illumination system, wherein the first filter eliminates light with wavelengths higher than a predetermined wavelength from the illuminating light beam, and wherein the illuminating system comprises an actuator for displacing the first filter from a second position in which the first filter is not positioned within the beam path to the first position; and

a controller configured for controlling the actuator for displacing the first filter from its second position to its first position based on an analysis of intensities of images represented by the set of first image data.

52. (New) The microscopy system according to claim 51, wherein the predetermined wavelength is in a range of one of 690 nm to 720 nm, 720 nm to 750 nm, 750 nm to 780 nm, and 780 nm to 800 nm.